

SR 202 CORRIDOR STUDY

EAST LAKE SAMMAMISH PARKWAY TO 244TH AVE NE

MP 8.22 TO MP 13.00



JUNE 30, 2019

Management of Mobility Division
Seattle, WA 98104

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WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
NORTHWEST REGION

SR 202 Corridor Study East Lake Sammamish Parkway to 244th Ave NE

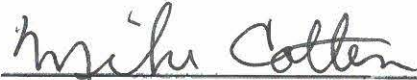
Approved by:



Patty Rubstello
Assistant Secretary of Urban Mobility and Access

6/20/19

Date



Mike Cotten
WSDOT Northwest Region Administrator

6-24-19

Date

Concurrence:



Kerri Woehler
Director, Multimodal Planning

6-21-2019

Date

Executive Summary

Background and Context

The State Route 202 Corridor Study is a planning level effort to assess the current and future conditions along SR 202 between mileposts 8.22 at East Lake Sammamish Parkway and 13.00 at 244th Ave NE. The study uses a Practical Solutions approach to identify potential strategies to address performance issues along the study corridor.

Existing mobility concerns include traffic congestion along the corridor, particularly at the intersections of East Lake Sammamish Parkway, 188th Ave NE, and Sahalee Way NE. Congestion occurs during both morning and evening commutes, and it is more significant in the westbound direction during the morning peak and in the eastbound direction in the evening peak. The SR 202 corridor west of 188th Ave NE is “functionally complete” with access management, transit, pedestrian, and bike facilities. Capacity improvements in Redmond are constrained by right of way and the existing infrastructure. Active transportation facilities and transit service are limited throughout the corridor, especially on the eastern, more rural, portion of the corridor.

This study was funded by the Washington State Legislature to identify potential improvement strategies to address identified performance issues. No design or construction funds are currently available for implementation of any of the strategies.

Purpose and Need

This study explores and documents current and future travel patterns and traffic volume trends to identify existing and future transportation needs and possible solutions to improve travel time, predictability, and operations along the corridor for all users. Potential solutions will be measured and evaluated in terms of their feasibility, potential to improve mobility, safety benefits, and environmental impacts. This study uses WSDOT's Practical Solutions approach to identify and rank potential improvement options.

The need for this study stems from rapidly increasing population and employment in the region, which has resulted in demand that exceeds capacity on SR 202, resulting in traffic congestion. Limited alternative routes, continuing development of Sound Transit's Eastside Link project, and future demand have driven the need for WSDOT and study partners to re-examine existing and future performance gaps along the corridor.

Study Process

The SR 202 Corridor Study identifies near-term and long-term strategies to meet operational, demand management, and capacity needs on the SR 202 corridor. As part of the Practical Solutions approach, WSDOT and study partners evaluated improvement strategies through an incremental approach, where lower cost, near-term operational and demand-management strategies are considered first before capacity expansion strategies because these can be implemented relatively quickly and cost-effectively.

The SR 202 study uses an interim planning year of 2025 to identify near-term solutions and year 2045 for long-range analysis. The improvement strategies for near-term and long-range analysis periods were developed in close consultation with SR 202 study partners. Practical Solutions evaluation criteria were used to establish priorities for near-term and long-term operational, demand management, and capacity strategies/solutions. This allows WSDOT and study partners to identify appropriate corridor investments when and where they are needed.

Major elements completed as part of this study include:

- Stakeholder and Community Engagement
- Existing and Future Conditions Traffic Analysis
- Strategy Development and Evaluation

Strategy Development and Evaluation

After gathering information from the existing conditions and future-year baseline analysis, local knowledge of traffic operations, and community outreach, the stakeholder team developed a list of strategies that could address mobility issues along the SR 202 corridor. This list was compiled using a Practical Solutions approach and contained near-term, cost-effective strategies as well as longer-term, higher-cost capital solutions. Due to the scope and budget of the study, there is a greater focus on near- and mid-term strategies. Strategies were gathered based on input from previous studies, stakeholders, the public, and analysis.

This list of strategies was then screened to identify those that met the purpose and need of the study. Then, the strategies were ranked using a qualitative assessment and evaluation. A select group of the most promising strategies were advanced into quantitative evaluation using the performance metrics described in section 7.2.

The individual scores for each performance metric were combined into a total performance score for each alternative. These scores range from 0 to 28, where 28 is the highest score received by an alternative. The alternatives were then grouped into strategies as recommended improvement strategies in the near-, mid-, and long-term.

Recommendations

The final screening process and list of recommended strategies was presented to the stakeholder group for their concurrence. These strategies align with WSDOT's Practical Solutions approach and were developed in partnership with study stakeholders and the public.

The following tables list the recommended improvement strategies for consideration in the near-, mid-, and long-term. Strategies highlighted in yellow have been analyzed quantitatively, while grey-highlighted strategies have been analyzed qualitatively. Green-highlighted strategies are transportation demand management strategies. All recommended strategies are subject to further planning and design analysis.

Cost estimates were generated using WSDOT's Planning Level Cost Estimating Tool (PLCE) in 2016 dollars. These estimates were developed with little to no design. Unknown factors could lead to changes in the estimates in the future. The range show below displays 10% below average estimated project cost (low range) and 20% above average estimated project cost (high range).

Transportation demand management strategies These strategies reduce vehicle trips or shift trips to off-peak periods and include concepts like increased investment in transit service, park and ride lots, dedicated bicycle and pedestrian facilities, and employer shuttle services. TDM strategies could be applied to near-, mid-, and long-term horizons as funding becomes available or opportunities present themselves. TDM strategies require coordination between a variety of agencies and jurisdictions and may be implemented by agency partners.

Near-Term Strategies These are low-cost strategies that have a high return on investment and can be delivered relatively quickly. These types of strategies include intelligent transportation systems investments, multimodal, and demand management strategies. These could be implemented by year 2025, and include the following strategies:

NEAR-TERM STRATEGIES (2025)						
Intersection/Corridor	Alternatives	Total Score	Timeframe	Estimated Cost: Low Range	Estimated Cost: High Range	Partners & Resources
E Lake Samm Pkwy NE	Remove middle crosswalk and add it to the east leg (greater effectiveness when combined with mid-term strategy of added southbound through lane)	20.5	Near-term	450,000	600,000	WSDOT King County
NE 50th St and 218th Ave NE	Modify access and operations at NE 50th, such as restricting movements to right-in/right-out or modifying to one-way access.	19.5	Near-term	90,000	120,000	WSDOT King County
Corridor Wide	Expand KCM Community Connections, Ride2, Mobility Hub, Just One Trip, Safe Routes to School, and School Pool programs in the Redmond and Sammamish area	N/A	Near-term	N/A	N/A	King County Metro Schools Employers WSDOT
Corridor Wide	Evaluate potential to reroute or add KC Metro and Sound Transit service from Sammamish Plateau to Redmond area via Inglewood Hill Road and East Lake Sammamish Parkway	N/A	Near-term	N/A	N/A	King County Metro Schools Employers, WSDOT
Corridor Wide	Implement planned express KCM transit service along SR 202 by 2025 and 2045; Evaluate need for additional bus stops along SR 202.	N/A	Near-term	N/A	N/A	King County Metro
Corridor Wide	Evaluate potential to utilize church parking lots in Sammamish as park and rides during the work week	N/A	Near-term	N/A	N/A	King County Metro WSDOT
E Lake Samm Pkwy NE	Consider extending bike markings through intersection	N/A	Near-term	N/A	N/A	WSDOT Redmond
Corridor Wide	Consider installing additional ITS/ driver information signage	N/A	Near-term	N/A	N/A	WSDOT Redmond Sammamish King County

Mid-Term Strategies These strategies are moderate to higher cost improvements that could be implemented to further manage congestion along SR 202. These strategies include the installation of roundabouts at strategic locations, turn pockets, intersection improvements, and potential off-corridor improvements. Mid-term strategies could be implemented between years 2025-2045.

MID-TERM STRATEGIES (2025-2045)						
Intersection/ Corridor	Alternatives	Total Score	Timeframe	Estimated Cost: Low Range	Estimated Cost: High Range	Partners & Resources
Sahalee Way NE	Option B Roundabout (Metered)	28	Mid/long term	8,100,000	10,800,000	WSDOT King County
E Lake Samm Pkwy NE	Make a new southbound through lane in the western island: left, left/through, through, right turn slip lane	20	Mid/long term	1,890,000	2,520,000	WSDOT King County
204th PI NE	Extend turn lanes on 204th	20	Mid/long term	1,530,000	2,040,000	WSDOT King County
NE 50th St and 218th Ave NE	Add a left turn pocket on EB SR 202 to 218th	18.5	Mid/long term	1,350,000	1,800,000	WSDOT King County
Corridor Wide	Consider establishing a shuttle service on the Sammamish Plateau	N/A	Mid/long term	N/A	N/A	King County Metro Private sector
Corridor Wide	Evaluate installation of bike/pedestrian accommodations	N/A	Mid/long term	N/A	N/A	WSDOT King County Redmond Sammamish
Sahalee Way NE	Evaluate potential for bus only lane connecting to park and rides	N/A	Mid/long term	N/A	N/A	WSDOT King County Redmond Sammamish King County Metro

Long term strategies These strategies are the highest-cost options that could provide benefits corridor wide. These concepts include higher-cost roundabouts and additional intersection improvements that would likely be implemented after year 2045.

LONG-TERM STRATEGIES (2045)						
Intersection/Corridor	Alternatives	Total Score	Timeframe	Estimated Cost: Low Range	Estimated Cost: High Range	Partners & Resources
Corridor Wide	Road diet + corridor-wide roundabouts (188th to Sahalee Way)	18	Long-term	TBD	TBD	WSDOT King County
Corridor Wide	Evaluate potential for dedicated HOV lane, queue jumps, slip lanes for buses at intersections	N/A	Long-term	N/A	N/A	WSDOT King County Redmond Sammamish King County Metro

Next Steps

The strategies suggested in this study will enable WSDOT and other agencies to address identified performance issues along the study corridor. Funding is not currently available for any of the recommended strategies included in this report, therefore, grants, partnerships or other funding sources will need to be pursued. WSDOT pursues funding through a statewide priority process. Top investment priorities include preservation of existing assets such as pavement and bridges, safety, and removal of fish passage barriers.

WSDOT will continue to work with stakeholders and agency partners to implement cost-effective operational and transportation demand management strategies, which can be considered for implementation in the near-, mid-, and long-term. Recommended strategies must be consistent with state, regional, and local planning efforts. At this time, the Puget Sound Regional Council's Regional Transportation Plan does not identify any funds or projects for the study corridor.